Magno Enrique **Mendoza Meza**

Av. dos Estados, 5001. Bairro Santa Terezinha. Santo André - SP - Brasil . CEP 09210-580

+55 11 992938603 | magno.meza@ufabc.edu.br; m.e.m.meza@gmail.com | https://github.com/Magno-Meza-UFABC

Prof. Dr. Magno Enrique Mendoza Meza

Associate Professor at Federal University of ABC *Santo André, SP, Brasil*

Engineering, Modeling and Applied Social Sciences Center

Av. dos Estados, 5001. Bairro Santa Terezinha. Santo André - SP - Brasil . CEP 09210-580

Fone: (11) 992938603 - (11) 29229711

E-mail: magno.meza@ufabc.edu.br; m.e.m.meza@gmail.com

Feb. 2009 - Current

Accreditation

- Instrumentation, Automation and Robotics Engineering Course
- Graduate Program in Mechanical Engineering

Academic education

Pontifical Catholic University of Peru, PUCP, Perú

Undergraduation: Electronic Engineering *1997*

College of Science and Engineering

Federal University of Rio de Janeiro, UFRJ, Brazil

Master in Electrical Engineering *1999*

Electrical Engineering Program - COPPE/UFRJ

Federal University of Rio de Janeiro, UFRJ, Brazil

D.Sc. in Electrical Engineering *2004*

Electrical Engineering Program - COPPE/UFRJ

National Laboratory of Scientific Computing, LNCC, Brazil

Post doctoral *2004-2006*

Scholarship holder of the Carlos Chagas Filho Foundation for Research Support in the State of RJ, FAPERJ, Brazil

Federal University of Rio de Janeiro, UFRJ, Brazil

Post doctoral *2006-2008*

Scholarship holder of the National Council for Scientific and Technological Development, CNPq, Brazil.

Undergraduate teaching

Undergraduate

Federal University of ABC *2009 - Atual*

- Bachelor of Science and Technology (BC&T): Classes taught
  - Experimental Bases of Natural Sciences
  - Experimental Methods in Engineering
  - Mathematical Bases
  - Instrumentation and Control
  - Modeling and Control
- Instrumentation, Automation and Robotics Engineering: Subjects Taught
  - Control Systems II
  - Introduction to Discrete Control
  - Optimal Control Theory
  - Analysis of Linear Dynamic Systems

Graduate

Federal University of ABC *2011 - Atual*

- Graduate Program in Mechanical Engineering
  - Nonlinear Control Techniques
  - Control and Identification of Systems in Discrete Time

Intellectual Production

Relevant Publications

Journal articles

- Mendoza Meza, Magno Enrique. Python app for drawing Bode diagram asymptotes of transfer function for minimum and non-minimal phase systems. Engineering Reports, v. 12535, p. 1-23, 2022.
- RAFIKOV, M. ; MEZA, M. E. M. ; CORREA, D. P. F. ; Wyse, A. P. . Controling Aedes aegypti populations by limited Wolbachia-based strategies in a seasonal environment. MATHEMATICAL METHODS IN THE APPLIED SCIENCES (ONLINE), v. 46, p. 5736-5745, 2019.
- Ferreira, C. Z. ; CARDOSO, R. ; MEZA, M. E. M. ; Avila, J. P. J. . Controlling tracking trajectory of a robotic vehicle for inspection of underwater structures. OCEAN ENGINEERING, v. 149, p. 373-382, 2018.
- Zucatelli F. H. G. ; MEZA, M. E. M. ; FENILI, A. . LagranTexPac: A Software Tool to Obtain the Dynamic Equations of Mechanical Systems. INTERNATIONAL JOURNAL OF COMPUTER THEORY AND ENGINEERING, v. 09, p. 242-249, 2017.
- CARDOSO, R. ; MEZA, M. E. M. . Comparison of Two Fuzzy Skyhook Control Strategies Applied to an Active Suspension. INTERNATIONAL JOURNAL OF COMPUTER SCIENCE AND SOFTWARE ENGINEERING, v. 5, p. 108-113, 2016.
- MEZA, M. E. M.; ZUCATELLI, F. H. G. . Compensators design utilizing the frequency response methods and generating a summary report in Latex: Interactive Graphical User Interface. INTERNATIONAL JOURNAL OF COMPUTER SCIENCE AND SOFTWARE ENGINEERING, v. 5, p. 126-134, 2016.
- BHAYA, A. ; MEZA, M. E. M. Control of nonlinear dynamic models of predator-prey type. OECOLOGIA AUSTRALIS, v. 1, p. 81-98, 2012.
- MEZA, M. E. M.; Bhaya, A. Controlling predator-prey discrete dynamics utilizing a threshold policy with hysteresis. Applied Mathematics and Computation, p. 7874-7886, 2011.
- MEZA, M. E. M.; COSTA, M. I. S. Exploitation of a single species by a threshold management policy. Mathematical Biosciences, v. 234, p. 25-32, 2011.
- MEZA, M. E. M.; BHAYA, A. Virus dynamics models subjected to a hybrid on-off control. Journal of Biological Systems, v. 18, p. 339-356, 2010.
- MEZA, M. E. M.; BHAYA, A. Control theory and the management of ecosystems: A threshold policy with hysteresis is robust. Applied Mathematics and Computation, v. 216, p. 3133-3145, 2010.
- MEZA, M. E. M.; BHAYA, A. Realistic threshold policy with hysteresis to control predator-prey continuous dynamics. Theory in Biosciences, v. 128, p. 139-149, 2009.
- MEZA, M. E. M.; BHAYA, A. ; KASZKUREWICZ, E. . Stabilizing control of ratio-dependent predator¿prey models. Nonlinear Analysis: Real World Applications, v. 7, n.4, p. 619-633, 2006.
- COSTA, M. I. S. ; MEZA, M. E. M. . Coexistence in a chemostat: Application of a threshold policy. Chemical Engineering Science, v. 61, n.10, p. 3400-3402, 2006.
- COSTA, M. I. S. ; MEZA, M. E. M. . Application of a Threshold Policy in the Management of Multispecies Fisheries and Predator Culling. IMA Journal of Mathematics Applied in Medicine and Biology, v. 23, n.1, p. 63-75, 2006.
- MEZA, M. E. M.; BHAYA, A. ; KASZKUREWICZ, E. ; COSTA, M. I. S. . On-off policy and hysteresis on-off policy of the herbivore-vegetation dynamics in a semi-arid grazing system. Ecological Engineering, v. 28, p. 114-123, 2006.
- COSTA, M. I. S. ; MEZA, M. E. M. . Dynamical stabilization of grazing systems: an interplay among plant-water interaction, overgrazing and a threshold management policy. Mathematical Biosciences, v. 204, p. 250-259, 2006.
- COSTA, M. I. S. ; MEZA, M. E. M. . Harvesting of dynamically complex consumer¿resource systems: Insights from a threshold management policy. Ecological Complexity (Print), v. 3, n.3, p. 193-199, 2006.
- MEZA, M. E. M.; BHAYA, A. ; KASZKUREWICZ, E. ; COSTA, M. I. S. . Threshold policies control for predator¿prey systems using a control Liapunov function approach. THEORETICAL POPULATION BIOLOGY, v. 67, n.4, p. 273-284, 2005.
- MEZA, M. E. M.; BHAYA, A. ; KASZKUREWICZ, E. . Comparison of controllers design techniques for the Lotka-Volterra nonlinear system. CONTROLE & AUTOMAÇÃO (IMPRESSO), Brazil, v. 16, n.2, p. 124-135, 2005.
- MEZA, M. E. M.; BHAYA, A. . Zero-placement approach to the design of sliding surfaces for linear multivariable systems. IEE Proceedings. Control Theory and Applications, v. 148, n.5, p. 333-339, 2001.

Relevant Publications

Conference papers

- ARENA, DOUGLAS LUAN CARDOSO ; MEZA, MAGNO ENRIQUE MENDOZA ; DE SOUZA, MARCOS FERNADES . Estabilidade de voo de um quadrirrotor: Controle de linearização por realimentação com rastreamento linear quadrático. In: 2021 14th IEEE International Conference on Industry Applications (INDUSCON), 2021, São Paulo. 2021 14th IEEE International Conference on Industry Applications (INDUSCON), 2021. p. 1124.
- ARENA, DOUGLAS ; Mendoza Meza, Magno Enrique ; FERNANDES, MARCOS ; RAFIKOVA, ELVIRA . LQR-Backstepping hybrid controller for flight stabilization for autonomous quadrirotor. In: 26th International Congress of Mechanical Engineering, 2021. Proceedings of the 26th International Congress of Mechanical Engineering.
- PAGOTTI, ANA PAULA ; RODRIGUES JUNIOR, PAULO EDUARDO ; RAFIKOVA, ELVIRA ; Mendoza Meza, Magno Enrique . Mathematical Modelling, Computational Fluid Dynamics with Ansys CFX and Experimental Analysis of a Hovercraft Prototype?s Air Cushion Lift System. In: 26th International Congress of Mechanical Engineering, 2021. Proceedings of the 26th International Congress of Mechanical Engineering.
- OLIVEIRA, ALLAN ; CARDOSO, REGINALDO ; CRISOL DONHA, DÉCIO ; Mendoza Meza, Magno Enrique . Application of SDRE control to Hybrid Remotely Operated Vehicle. In: 26th International Congress of Mechanical Engineering, 2021. Proceedings of the 26th International Congress of Mechanical Engineering.
- DE SOUZA, WASHINGTON FERNANDES ; RAFIKOVA, ELVIRA ; MEZA, MAGNO ENRIQUE MENDOZA ; GAFUROV, SALIMZHAN . Backstepping Trajectory Tracking of Underactuated Hovercraft. In: 2018 Global Fluid Power Society PhD Symposium (GFPS), 2018, Samara. 2018 Global Fluid Power Society PhD Symposium (GFPS), 2018. v. 2018. p. 1-7.
- SANTIAGO, ROBSON COSTA ; MEZA, MAGNO ENRIQUE MENDOZA ; TITOTTO, SILVIA LENYRA MEIRELLES CAMPOS . DESENVOLVIMENTO DE DESIGN MODULAR PARA ROV BIOINSPIRADO. In: 11º Congresso Brasileiro de Inovação e Gestão de Desenvolvimento do Produto, 2017, São Paulo. Blucher Design Proceedings, 2017. v. 1. p. 602-7.
- Oliveira, A C F ; MEZA, M. E. M. ; CORREA, D. P. F. . Modelling and control of a wheeled mobile robot. In: 24th ABCM International Congress of Mechanical Engineering, 2017, Curitiba. Proceedings of 24th ABCM International Congress of Mechanical Engineering, 2017. v. 1. p. 1-6.
- CARDOSO, REGINALDO ; MEZA, MAGNO E. M. ; RAFIKOVA, ELVIRA ; TITOTTO, SILVIA L. M. C. . Backstepping and integrative sliding mode control for trajectory tracking of a hybrid remotely operated vehicle. In: 2017 IEEE International Conference on Robotics and Biomimetics (ROBIO), 2017, Macau. 2017 IEEE International Conference on Robotics and Biomimetics (ROBIO), 2017. v. 1. p. 116-121.
- SOUZA, W. F. ; SILVA, G. R. R. ; MEZA, M. E. M. ; E. Rafikova . Backstepping and PIV control applied to magnetic levitation. In: 24th ABCM International Congress of Mechanical Engineering, 2017, Curitiba. Proceeding of 24th ABCM International Congress of Mechanical Engineering, 2017. v. 1. p. 1-10.
- ZUCATELLI, F. H. G. ; MEZA, M. E. M. . Backstepping Controllers for a Cart-Pole System in Two Configuration. In: 23rd ABCM International Congress of Mechamical Engineering - COBEM 2015, 2015, Rio de Janeiro. Proceeding of 23rd ABCM International Congress of Mechamical Engineering, 2015. v. 1. p. 1-8.
- SANO, R. Y. ; LONGA, W. B. ; TEIXEIRA, J. C. ; MEZA, M. E. M. . Equipamento didático de laboratório para engenharia: Aeropêndulo. In: XLIII Congresso Brasileiro de Educação em Engenharia, 2015, São Berbardo Do Campo, SP. Anais do XLIII Congresso Brasileiro de Educação em Engenharia, 2015. v. 2015. p. 1-10.
- DA SILVA, THIAGO ABRAÃO DOS ANJOS ; MEZA, MAGNO ENRIQUE MENDOZA ; FENILI, ANDRÉ ; BALTHAZAR, JOSÉ MANOEL ; DA FONSECA BRASIL, REYOLANDO MANOEL LOPES REBELLO . A nonlinear model and force control of a robotic claw. In: 10TH INTERNATIONAL CONFERENCE ON MATHEMATICAL PROBLEMS IN ENGINEERING, AEROSPACE AND SCIENCES: ICNPAA 2014, 2014, Narvik. v. 1637. p. 988-997.
- Mendoza Meza, Magno Enrique. Projeto de compensadores pelo método da resposta de frequência: Uma interface interativa. In: 25º Simpósio Brasileiro de Informática na Educação (SBIE 2014), 2014, Dourados - MS. Anais do 25º Simpósio Brasileiro de Informática na Educação (SBIE 2014), 2014. v. 1. p. 911-919.
- SILVA, T. A. A. ; MEZA, M. E. M. ; FENILI, A. . Analysis nonlinearities in a mechanical model of a claw during the contact and impact. In: 22nd Internacional Congress of Mechanical Engineering, 2013, Ribeirão Preto. 22nd Internacional Congress of Mechanical Engineering. Reston: American Institute of Aeronautics and Astronautics, 2013. v. 1. p. 10328-10333.
- MEZA, M. E. M.; BHAYA, A. . Application of a hybrid on-off control in virus dynamics models. In: XVIII Congresso Brasileiro de Automática, 2010, Bonito - MS. Anais do XVIII Congresso Brasileiro de Automática, 2010. p. 1-6.
- MEZA, M. E. M.; BHAYA, A. ; KASZKUREWICZ, E. . Predator-Prey Dynamics Subject to a Threshold Policy with Hysteresis. In: 17th Triennial World Congress of the International Federation of Automatic Control, 2008, Seoul. 17th Triennial World Congress of the International Federation of Automatic Control. Seoul: Seoul, 2008. v. 1. p. 6263-6288.
- MEZA, M. E. M.; BHAYA, A. . Controlling Predator-Prey discrete dynamics utilizing a Threshold Policy with Hysteresis. In: XVII Congresso Brasileiro de Automática (CBA2008), 2008, Juiz de Fora. XVII Congresso Brasileiro de Automática. Juiz de Fora: UFJF, 2008. p. 1-6.
- MEZA, M. E. M.; BHAYA, A. ; KASZKUREWICZ, E. . Stabilizing control of ratio-dependent predator-prey models. In: III Brazilian Symposium on Mathematical and Computational Biology, 2003, Rio de Janeiro. Proceedings of the Third Brazilian Symposium on Mathematical and Computational Biology, 2003.
- MEZA, M. E. M.; BHAYA, A. ; KASZKUREWICZ, E. . Control of one and two species predator-prey models using continuous threshold policies. In: 14th Brazilian Conference on Automatica Control, 2002, Natal - RN. Annals of the 14th Brazilian Conference on Automatica Control, 2002. p. 146-151.
- MEZA, M. E. M.; COSTA, Michel I S ; BHAYA, A. ; KASZKUREWICZ, E. . Threshold policies in the control of predator-prey models. In: 15th Triennial World Congress of the International Federation of Automatic Control, 2002, Barcelona. Preprints of the 15th Triennial World Congress of the International Federation of Automatic Control, 2002.

Relevant Publications

Conference papers

- MEZA, M. E. M.; BHAYA, A. ; KASZKUREWICZ, E. . Threshold Policies in the Control of Ecological Models. In: 41st IEEE Conference on Decision and Control, 2002, Las Vegas, Nevada, USA. Proceeding of the 41st IEEE Conference on Decision and Control, 2002. p. 937-942.
- MEZA, M. E. M.; BHAYA, A. . A zero placement approach for designing sliding surfaces for multivariables systems. In: XIII Congresso Brasileiro de Automática (CBA), 2000, Florianópolis - Santa Catarina. Anais do XIII Congresso Brasileiro de Automática, 2000. p. 1980-1985.

Software registration

- MAGNO ENRIQUE MENDOZA MEZAA. GRAPHIC ASYMPTOTES. 2022. Patent: Computer Program. Register number: BR5120150011901, Registration Date: 07/26/2022, title: “GRAPHIC ASYMPTOTES 2.0” , Institution of registration: INPI - National Institute of Industrial Property (Brazil).
- MAGNO ENRIQUE MENDOZA MEZA and FERNANDO HENRIQUE GOMES ZUCATELLI. CDMR FREQUENCY 2.0. 2018. Patent: Computer Program. Register number: BR512018001208-6, Registration Date: 07/24/2018, title: “CDMR FREQUENCY” , Institution of registration: INPI - National Institute of Industrial Property (Brazil).
- FERNANDO HENRIQUE GOMES ZUCATELLI and MAGNO ENRIQUE MENDOZA MEZA. LAGRANTEXPAC. 2017. Patent: Computer Program. Register number: BR512016001345-1, Registration Date: 03/28/2017, title: “CDMR FREQUENCY” , Institution of registration: INPI - National Institute of Industrial Property (Brazil).
- MAGNO ENRIQUE MENDOZA MEZAA. GRAPHIC ASYMPTOTES. 2015. Patent: Computer Program. Register number: BR5120150011901, Registration Date: 10/19/2015, title: “GRAPHIC ASYMPTOTES” , Institution of registration: INPI - National Institute of Industrial Property (Brazil).
- MAGNO ENRIQUE MENDOZA MEZA. CDMR FREQUENCY. 2015. Patent: Computer Program. Register number: BR5120150011898, Registration Date: 10/19/2015, title: “CDMR FREQUENCY” , Institution of registration: INPI - National Institute of Industrial Property (Brazil).

Research project

Research project development

Project: Fostering the Use of Communication and Information Technologies (TICs)

Sub-project: Virtual Laboratory via WEB for control theory applications *2010 - 2012*

- Coordinator: Profa. Lucia Regina Horta Rodrigues Franco
- Sub-Coordinator: Magno Enrique Mendoza Meza
- Sponsor: Research Support Foundation of the State of São Paulo - Financial aid

Participation in research projects

Optimization of control strategies to suppress dengue transmission *2016 - Current*

- Coordinator: Prof. Marat Rafikov
- Members: Magno Enrique Mendoza Meza and Diego Paolo Ferruzzo Correa
- Sponsor: Research Support Foundation of the State of São Paulo - Financial aid.

MODELING AND OPTIMIZATION OF DENGUE VECTOR CONTROL *2013 - 2015*

- Coordinator: Prof. Marat Rafikov
- Members: Magno Enrique Mendoza Meza e ALFREDO DEL SOLE LORDELO
- Sponsor: Research Support Foundation of the State of São Paulo - Financial aid.

Advisoring concluded

Undergraduate

Scientific initiation

Federal University of ABC

- Marcos Moreira Lopes. Simulator for the Remote Controlled Hybrid Vehicle. 2019. Scientific Initiation. (Graduating in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- Aline Shimoi Rodrigues. Modeling and Simulation of HROV/Proteo in contact with a submerged surface. 2019. Scientific Initiation. (Graduating in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- JOÃO VITOR MIRANDA SANTOS. ANALYSIS AND PROPOSAL OF TRANSDUCERS APPLIED TO SUBMERSIBLE VEHICLES. 2017. Scientific Initiation. (Graduating in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC, National Council for Scientific and Technological Development. Advisor: Magno Enrique Mendoza Meza.
- Allan Carlos Ferreira de Oliveira. Modeling and control of a differential mobile robot. 2016. Scientific Initiation. (Graduating in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- Camilo Cordeiro Pedra. Modeling and construction of a two-dimensional magnetic levitator applied in an academic environment. 2016. Scientific Initiation. (Graduating in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- Camilo Cordeiro Pedra. Construction of a mobile application for the remote control of a Magnetic Levitator. 2015. Scientific Initiation. (Graduating in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC, Coordination for the Improvement of Higher Education Personnel. Advisor: Magno Enrique Mendoza Meza.
- Camilo Cordeiro Pedra. Construction of a Magnetic Levitator for application in an academic environment. 2014. Scientific Initiation. (Graduating in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC, Coordination for the Improvement of Higher Education Personnel. Advisor: Magno Enrique Mendoza Meza.
- Hewerton Luis Ockner Silva. Linear and Non-Linear Control System applied to a Magnetic Levitator. 2014. Scientific Initiation. (Graduating in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC, Coordination for the Improvement of Higher Education Personnel. Advisor: Magno Enrique Mendoza Meza.
- Rodrigo Yoshio Sano. Construction of a didactic kit: Aerodynamic pendulum. 2013. Scientific Initiation. (Graduating in Bachelor of Science and Technology) - Federal University of ABC, National Council for Scientific and Technological Development. Advisor: Magno Enrique Mendoza Meza.

Undergraduate final project

Federal University of ABC – Instrumentation, Automation and Robotics Engineering

- Hugo Lauer Garcia De Almeida. MONITORING SYSTEM OF AN UNDERWATER VEHICLE. 2021. Undergraduate final project. (Graduation in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- Annick da Silva Mody Diallo. Depth control of a scaled-down prototype remote-operated underwater vehicle. 2021. Undergraduate final project. (Graduation in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- Rodrigo de Carvalho Santos. DESIGN AND CONSTRUCTION OF A REMOTELY OPERATED WATER VEHICLE: Development of a prototype. 2020. Undergraduate final project. (Graduation in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- Ana Carolina Liberato. REMOTELY OPERATED UNDERWATER VEHICLE: DESIGN AND PROTOTYPE CONSTRUCTION. 2020. Undergraduate final project. (Graduation in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- BRUNO VESSIO FERRAIOLI. Modeling, Simulation and Control of a Mobile Robot with Differential Drive. 2019. Undergraduate final project. (Graduation in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- Leonardo Chen Jia Hui. Modeling, LQR control and simulation of remotely controlled underwater vehicle. 2019. Undergraduate final project. (Graduation in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- Bruno Roberto Breciani.Modeling, Simulation and Control of an autonomous underwater vehicle. 2019. Undergraduate final project. (Graduation in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- Aline Shimoi Rodrigues. REMOTELY OPERATED HYBRID VEHICLE CONTROL: CASE IN CONTACT WITH SUBMERGED VERTICAL SURFACE. 2018. Undergraduate final project. (Graduation in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- José Roberto Almeida Pereira. LINEAR CONTROL OF ELECTRONIC DIFFERENTIAL FOR ELECTRIC VEHICLE. 2018. Undergraduate final project. (Graduation in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- NILTON GOMES MARTINS JÚNIOR. H-INFINITE CONTROL APPLICATION FOR UNDER-ACTUATED AUTONOMOUS SUBMERSIBLE VEHICLE. 2018. Undergraduate final project. (Graduation in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- YAGO PEREIRA DE SOUZA ARRAIS. Modeling and implementation of a solar tracker using an array of photovoltaic cells. 2017. Undergraduate final project. (Graduation in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- Augusto Martins Terada. Radiofrequency communication protocol based on the Controller Area Network (CAN) for control applications. 2017. Undergraduate final project. (Graduation in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- Renato Maier. NON-LINEAR CONTROL BY SLIDING MODES APPLIED IN A QUADR-ROTOR WITH DEVELOPMENT OF CONTROL BY BACK-STEPPING FOR FUTURE APPLICATIONS. 2017. Undergraduate final project. (Graduation in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- LUCAS GABRIEL MATTOS. Electronic traction differential control for land vehicles. 2017. Undergraduate final project. (Graduation in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- Leandro Silva Pereira. Vehicle Brake Control System. 2016. Undergraduate final project. (Graduation in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- Alexandre Massayuki Kawamoto. Statistical modeling of a butterfly body for Function in the loop simulation with PID-based control. 2016. Undergraduate final project. (Graduation in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- Marcelo Akira Takii. Sensory vest for visually impaired people. 2016. Undergraduate final project. (Graduation in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- Luis Gustavo Ribeiro. Design and implementation of an automatic guitar tuner. 2016. Undergraduate final project. (Graduation in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- Shéridan Zabulon Lisbôa Nunes Oliveira. Ball and Plate System: Modeling, Simulation, Design and Implementation of two Control Techniques. 2016. Undergraduate final project. (Graduation in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- Giliard Souza dos Anjos. Modeling and control of the simple pendulum with two degrees of freedom. 2015. Undergraduate final project. (Graduation in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- William Isidorio. Development of microclp using 8-bit microcontroller. 2015. Undergraduate final project. (Graduation in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- BRUNO RIVETTI ZABEU. Web-controlled home automation. 2015. Undergraduate final project. (Graduation in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.

Undergraduate final project

Federal University of ABC – Instrumentation, Automation and Robotics Engineering

- Lucas Theodore Costa Martins and Raian Bolonha Castilho Spinel. Semi-Active Side Collision Anti-Collision System via Image Processing. 2015. Undergraduate final project. (Graduation in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- Reginaldo Cardoso. Controller design techniques for active suspension. 2014. Undergraduate final project. (Graduation in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- Rafael Furlan Juliato. Study of an adaptive control for controlling a dc motor. 2014. Undergraduate final project. (Graduation in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- Fernando Henrique Gomes Zucatelli. Linear and non-linear control of a crane based on an inverted pendulum. 2014. Undergraduate final project. (Graduation in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- Felipe de Castro Silva. FEASIBILITY STUDY OF HYBRID AND ELECTRIC VEHICLES IN BRAZIL. 2013. Undergraduate final project. (Graduation in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- André Tanaka. Adaptive Control by Reference Model of a DC Motor. 2013. Undergraduate final project. (Graduation in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- ADBEN JOMIL TREVIZOLI DE CARVALHO. COMPARISON BETWEEN CONTROL TECHNIQUES IN MAGNETIC LEVITATION. 2012. Undergraduate final project. (Graduation in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- MARCUS VINICIUS BIANCHI DOS SANTOS. Nonlinear Controls Applied to a Nonlinear Inverted Pendulum. 2012. Undergraduate final project. (Graduation in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- THIAGO ABRAÃO DOS ANJOS DA SILVA. KINEMATICS ANALYSIS OF A 3D MANIPULATOR. 2012. Undergraduate final project. (Graduation in Instrumentation, Automation and Robotics Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.

Graduate

Master – Graduate Program in Mechanical Engineering

Federal University of ABC

- Douglas Luan Cardoso Arena. Attitude control of a quad-rotor for transporting large loads. 2022. Dissertation (Master's degree in Mechanical Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- Gustavo Rodrigues Ribeiro da Silva. MODELING AND CONTROL OF THE QUADRUPED ARTICULATED LOCOMOTION SYSTEM. 2019. Dissertation (Master's Degree in Mechanical Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- Reginaldo Cardoso. MODELING AND CONTROL OF THE QUADRUPED ARTICULATED LOCOMOTION SYSTEM. 2019. Dissertation (Master's Degree in Mechanical Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- Fernando Henrique Gomes Zucatelli. CINEMATIC AND DYNAMIC MODELING OF A ROBOTIC HAND FOR PRACTICAL TELEOPERATION APPLICATIONS. 2017. Dissertation (Master's Degree in Mechanical Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- Solange Damaceno. ARTICULATED MECHANICAL ARM PROTOTYPE FOR IMPLEMENTATION IN UNDERWATER VEHICLE. 2017. Dissertation (Master's Degree in Mechanical Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.
- WASHINGTON FERNANDES DE SOUZA. BACKSTEPPING CONTROL APPLIED TO HOVERCRAFT DYNAMICS. 2017. Dissertation (Master in Mechanical Engineering) - Federal University of ABC. Co-supervisor: Magno Enrique Mendoza Meza.
- Cristiano Zacarias Ferreira. TRAJECTORY TRACKING CONTROL SYSTEM OF A ROBOTIC VEHICLE FOR SUBMARINE STRUCTURES INSPECTION. 2016. Dissertation (Master in Mechanical Engineering) - Federal University of ABC. Co-supervisor: Magno Enrique Mendoza Meza.
- Thiago Abraão dos Anjos da Silva. MODELING AND FORCE CONTROL OF A CLAW EFFECTER. 2013. Dissertation (Master's Degree in Mechanical Engineering) - Federal University of ABC. Advisor: Magno Enrique Mendoza Meza.

Writing

Computer Systems Control: Design and Identification.

1. ed. São Paulo: Editora Blucher.
500p

Writer *2022.*

- In Portuguese.
- This book presents concepts necessary to control design with the aid of MATLAB and OCTAVE software, as well as the implementation of the control algorithm in some type of microcontroller.

Computer Systems Control: Introduction.

1. ed. Santo André: Editora UFABC.
324p

Writer *2021*

- In Portuguese.
- This book presents concepts necessary to understand the design of controls with the aid of MATLAB software, as well as the implementation of the control algorithm in some type of microcontroller

Administrative activities

Coordinator of Graduate Program in Mechanical Engineering *Federal University of ABC*

Period *September 2015 - August 2017*

- Restructuring of the Graduate Program
- Selection Process Commission

Vice-Coordinator of the Graduate Program in Mechanical Engineering *Federal University of ABC*

Period *January 2015 - August 2015*

- Selection Process Commission

Awards and titles

INOVAUFABC INNOVATION AGENCY *Federal University of ABC*

2015 - 2016

- Software development called: “Graphs of the Bode Diagram Asymptotes”
- Software development called: “Design of compensators by the frequency response method: An interactive interface”
- Software development called: “LagranTexPac”

Languages

English Basic Intermediate Proficiency
Spanish Native proficiency
Portuguese Professional proficiency

Interests

Linux Since 2017, I have been in love with Linux.
Python In the last year, I have enjoyed writing some applications for teaching control theory.
Meeting I like to prepare Brazilian-style barbecue.